

12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32 and 34 are allowable since they depend on Claim 4.

Claims 3, 5, 11 and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,768,084 (Noda) in view of U.S. Patent No. 5,726,707 (Sakurai). Claims 7, 9, 15 and 17 were rejected under Section 103(a) over Noda and Sakurai in view of the article, "HDTV Single-chip CCD Color Camera" by Tanaka (Tanaka).

In addition, Claim 19 was rejected under Section 103(a) over Noda in view of U.S. Patent No. 5,880,781 (Udagawa), Claims 21, 27 and 29 over Noda in view of Sakurai and in further view of Udagawa, and Claims 23, 25, 31 and 33 over Noda in view of Sakurai in view of Tanaka and further in view of Udagawa.

Applicants submit that independent Claim 3 is patentable over the prior art for at least the following reasons.

The aspect of the present invention set forth in independent Claim 3 is directed to an image pickup device that includes a color filter array with the color filters arranged in the horizontal and vertical directions. Plural pixels include photoelectric converting elements arranged in the horizontal and vertical directions, respectively

corresponding to the color filters. A plurality of vertical read-out units read out signals from the pixels in the vertical direction. A horizontal read-out unit reads out sequentially the signals from the plurality of vertical read-out units in the horizontal direction.

An output unit outputs sequentially the signals from the horizontal read-out unit. Control means divide the plural pixels on the unit basis of a predetermined number of lines which include a plurality of first lines and a plurality of second lines, and thin out the signals of the pixels of the plurality of second lines or add the signals of the pixels of the plurality of first lines and the signals of the pixels of the plurality of second lines. This facilitates control of the pixels of the predetermined number of lines so as to generate one kind of color difference signal.

The recited structure of Claim 3 has the advantage that the control means enable generation of one kind of color difference signal.

As understood by Applicants, Noda relates to a solid-state imaging device with two-row mixing gates. Noda teaches that signals of pixels of a first line and signals of pixels of a second line are added. Signals of pixels of a

third line and signals of pixels of a fourth line are added, thereby generating two kinds of color difference signals from signals of the pixels of four lines.

Applicants submit that Noda does not teach or suggest to add or thin out signals of pixels on a plurality of lines basis to generate one kind of color difference signal from signals of a predetermined number of lines including those plurality of lines, as recited in Applicants' amended Claim 3.

As understood by Applicants, Sakurai relates to a still picture recording digital camera with a light limiter that interrupts incident light to the camera. Sakurai teaches vertical and horizontal transfer CCDs 202 and 203 (shown in Fig. 2) through which signal charges are transferred to be output to an amplifier 106.

Applicants submit that Sakurai does not teach or suggest to add or thin out signals of pixels on a plurality of lines basis to generate one kind of color difference signal from signals of a predetermined number of lines including those plurality of lines, as recited in Applicants' amended Claim 3. Even if combined with Noda, it is not seen how anything in Sakurai would have led one of merely ordinary skill to this feature.

Accordingly, independent Claim 3 is believed clearly patentable over Noda and Sakurai, taken alone or in combination.

A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as references against Claim 3, and that Claim 3 is therefore believed patentable over the art of record.

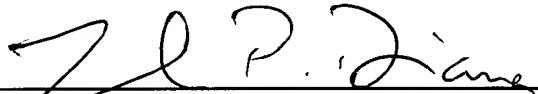
The other claims not yet indicated allowable in this application are each dependent from independent Claim 3, and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration or reconsideration, as the case may be, of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All

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Respectfully submitted,


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